Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 4, 2010 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moaddeb et al (6,405,078) in view of the teachings of Skalsky et al (4,844,099) and Truckai et al (6,458,127).

As asserted in previous Office actions, Moaddeb et al disclose the same basic catheter device as set forth in the instant application claims. The device includes a catheter body (12) having proximal and distal ends, a tip section (14) at the distal end of the catheter. The tip section includes a porous tip electrode (Abstract) and there is an irrigation tube (38) extending through the catheter and into the porous tip. The Moaddeb et al catheter is substantially identical to applicant's disclosed catheter, except the electrode is disclosed as being formed from a conductive, sintered material and the

instant application claims call for a tip electrode having a non-conductive porous material with a conductive porous coating.

Also addressed in previous Office actions is the Skalsky et al teaching that it is known to form a tip electrode from a non-conductive porous material, then provide the non-conductive material with a conductive porous coating (col. 6, lines 28-32). This construction presents a less-expensive electrode since the majority of the electrode is comprised of an inexpensive non-conductive porous material and the conductive coating results in far less high-cost material required to make the electrode element. Skalsky et al fail to disclose a thickness for the coating within the applicant's 0.2-2 micrometers.

The examiner maintains that the thicknesses used for coatings are generally known to those of ordinary skill in the art. In particular, it is noted that applicant's specification fails to disclose any criticality or unexpected result with the claimed and disclosed thickness of 0.2-2 micrometers. Paragraph [0035] of the printed publication merely state that this is a preferable range to provide perfusion, and that other ranges may be used. Further, the examiner maintains that it is generally known in the art to provide conductive coatings with thicknesses in the ranges set forth by applicant. Truckai et al disclose another RF device that provides a non-conductive substrate (12) that is coated with a conductive coating (40). In particular, Truckai et al disclose a wide range of thicknesses for the coatings including 0.00001 inches, which is about 0.25 microns (col. 6, lines 59-65). Hence, Truckai et al disclose a wide range of conductive

coating thicknesses, and particularly the use of coatings having a thickness as small as about 0.2 microns.

To have provided the Moaddeb et al device with an electrode made from a non-conductive, porous material having a conductive, porous coating to reduce the effective cost of the device would have been an obvious modification for one of ordinary skill in the art, particularly since Skalsky et al fairly teach that it is known to create a porous electrode device from a non-conductive material having only a conductive coating on the surface. To have further provided the coating with any reasonable thickness, including a thickness of 0.2 microns, would have been an obvious design consideration since Truckai et al fairly teach that conductive coatings of that thickness are generally known in the art.

Response to Arguments

Applicant's arguments filed January 4, 2010 have been fully considered but they are moot in view of the new grounds of rejection.

The Truckai et al reference has now been cited to teach conductive coating thicknesses within the range now set forth in the application claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jackson et al (5,486,238) disclose another device that provides a porous, non-conductive structure coated with a conductive coating, the coating having a thickness in the range of about 5 microns. Similarly, Swoyer et al (7,066,935) disclose yet another device having conductive coatings in the range of about 10 microns.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Peffley whose telephone number is (571) 272-4770. The examiner can normally be reached on Mon-Fri from 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Peffley/
Primary Examiner, Art Unit 3739

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January 13, 2010